Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal

Section 1. General administrative information

Analyze Ahtanum Creek Storage Project

Bonneville project number, if an ongoing project 9164

Business name of agency, institution or organization requesting funding
Ahtanum Irrigation District

Business acronym (if appropriate) AID

Proposal contact person or principal investigator:

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Email address

Subcontractors.

Organization	Mailing Address	City, ST Zip	Contact Name
TBA			
TBA			
TBA			

NPPC Program Measure Number(s) which this project addresses.

NMFS Biological Opinion Number(s) which this project addresses.

Other planning document references.

Subbasin.
Ahtanum Creek

Short description.
Complete design and permitting of a multipurpose storage reservoir in the Ahtanum Creek watershed. Potential beneficiaries of the project will include: AILD waterusers, Wapato Irrigation Project waterusers, fisheries, wildlife habitat, and recreation.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
X	Anadromous fish		Construction	X	Watershed
*	Resident fish		O & M		Biodiversity/genetics
*	Wildlife		Production		Population dynamics
	Oceans/estuaries		Research	*	Ecosystems
	Climate		Monitoring/eval.		Flow/survival
	Other	*	Resource mgmt		Fish disease
		X	Planning/admin.		Supplementation
			Enforcement	*	Wildlife habitat en-
			Acquisitions		hancement/restoration

Other keywords.
Storage, water supply, irrigation, stream restoration, flood control, recreation.

Section 3. Relationships to other Bonneville projects

Project #		Nature of relationship

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Field Control Survey	a	Topographic Survey
2	Geotechnical Exploration	b	Drilling and Sampling
3	Soil and Rock Analyses	c	Laboratory Testing
4	Geotechnical Evaluation	d	Geotechnical Calculations
5	Seismic Evaluation	e	Earthquake and Fault Study
6	Hydrologic Evaluation	f	Hydrologic Calculations

7	Environmental Review	g	NEPA/SEPA Check List
8	Environmental Impact	h	Environmental Impact Study
9	Cultural Resources	i	Cultural Survey
10	Threatened/Endangered Species	j	Species Survey
11	Public Involvements	k	Notices and Meetings
12	Dam Design	l	Civil and Structural Design
13	Instrumentation	m	Instrument Type Selection
14	Emergency Overflow	n	Spillway Analysis and Design
15	Intake and Outlet	o	Structural and Mechanical Design
16	Diversion Control	p	Civil and Hydraulics Design
17	Seepage Control	q	Foundation Cutoff Design
18	Delivery System Crossover	r	Mechanical and Electrical
19	Design Documentation	s	Technical Memoranda
20	Design Communications	t	Review Meetings and Phone Calls
21	Regulatory Permitting	u	Agency Meetings and Forms
22	Construction Drawings	v	Auto CAD Drafting and Design
23	Technical Specifications	w	Materials and Performance
24	Bidding and Contracting	x	Prepare Documents
25	Value Engineering	y	Cost Reduction Review
26	Construction Costs	z	Develop Cost Estimates
27	Dam Breach Impact	#	Breach Analysis
28	Breach Flood Impact	%	Inundation Map
29	Project Management	*	Manage Tasks
30	Project Administration	+	Administer Funds`

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	3/1999	6/1999	3.90%
2	4/1999	5/1999	11.10%
3	5/1999	6/1999	1.70%
4	4/1999	6/1999	1.40%
5	1/1999	2/1999	0.90%
6	1/1999	4/1999	6.50%
7	1/1999	2/1999	0.70%
8	2/1999	12/1999	17.10%
9	2/1999	10/1999	3.40%
10	2/1999	10/1999	0.80%
11	4/1999	10/1999	3.40%
12	5/1999	8/1999	2.90%
13	8/1999	9/1999	.40%
14	6/1999	8/1999	.90%

15	6/1999	8/1999	1.70%
16	4/1999	6/1999	1.70%
17	7/1999	8/1999	.90%
18	7/1999	8/1999	.90%
19	1/1999	12/1999	1.20%
20	1/1999	12/1999	2.50%
21	1/1999	12/1999	5.10%
22	5/1999	10/1999	6.80%
23	7/1999	10/1999	1.10%
24	10/1999	12/1999	1.20%
25	8/1999	10/1999	1.60%
26	8/1999	12/1999	0.90%
27	9/1999	10/1999	0.70%
28	9/1999	10/1999	0.30%
29	1/1999	12/1999	8.20%
30	1/1999	12/1999	9.70%
			TOTAL 99.60%

Schedule constraints.
The project will be affected by the ability of reviewing agencies to develop policies and define required compliance procedures.

Completion date.
The design and Permitting phase of the project could be completed in 1999. Other funding requirements for construction will follow in subsequent years.

Section 5. Budget

FY99 budget by line item

Item	**Note**	**FY99**
Personnel	AID Staff	$284,000
Fringe benefits		
Supplies, materials, non-expendable property		
Operations & maintenance		
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		
PIT tags	# of tags:	
Travel		
Indirect costs		

Subcontracts	Consulting Firms & Temp Help	$2,637,000
Other		
TOTAL		$2,921,000

Outyear costs

Outyear costs	**FY2000**	**FY01**	**FY02**	**FY03**
Total budget				
O&M as % of total				

Section 6. Abstract

The Ahtanum Irrigation District (AID) has identified the need to develop additional water supplies for various users within the Ahtanum Creek watershed. The proposed multipurpose water storage project would provide a reliable supply to: AID waterusers, Wapato Irrigation Project users, fisheries, and wildlife habitat. In addition, the project would provide limited amounts of flood control, fire protection and recreation. The reservoir is expected to have a storage capacity of approximately 20,000 acre feet and would be located in a small sub-basin adjacent to Ahtanum Creek.

Section 7. Project description

a. Technical and/or scientific background.

Ahtanum Creek is known to have very high flow rates during winter and spring runoff periods. These events generally occur when accumulated snow melts rapidly. The short duration high flows quickly subside at the same time that the demands for water are increasing. By the time crops need irrigation, the stream flow has diminished significantly. Most years, Ahtanum Creek has no flow in critical sections after July. The proposed storage project would make water available at times when it could benefit irrigated agriculture as well as fish and wildlife. By reducing the flows during peak runoff period, the property and habitat damage that regularly occurs would be less severe.

b. Proposal objectives.

It is the objective of the proposed multipurpose storage reservoir to provide additional water for agriculture, fisheries, and wildlife habitat. Other incidental benefits such as recreation, economic development, and fire protection would be produced by the project.

c. Rationale and significance to Regional Programs.

Storage of stream flows that are in excess of the instream needs has been successfully used to maximize the utilization of water resources. In the case of Ahtanum Creek, the

peak flow not only exceeds the instream needs but it causes environmental and property damage on a regular basis. The multipurpose storage project would be an effective way to use the water resource more efficiently. The technology of multipurpose storage is well proven. The proposed analysis will help determine if the environmental and other benefits justify the costs.

d. Project history

The Ahtanum Irrigation District and all of the other users of water in the Ahtanum Creek basin have suffered from water shortages since development began near the turn of the century. The water shortage has limited the productivity of the agricultural lands and the local economy has suffered. This storage project has the potential of improving the economic conditions while enhancing the stream ecosystems.

e. Methods.

The Design and Permit work being proposed is the second step toward implementation of the multipurpose reservoir project. The work will involve many areas of analysis that are beyond the capability of the AID staff to perform. Specialized consultants familiar with the development of projects of this size and complexity will be retained to complete the work. Many organizations and regulatory authorities will have input on the design process. It is proposed that the agencies be involved in the project from its beginning. Since the project is in and will serve a moderately populated area, public involvement will be an important input factor. The completed design and permits will enable a construction bidding process to occur and a construction contract to be executed so that the project can be built.)

f. Facilities and equipment.

The AID will require an office facility to establish a base for the administration of the project. Office equipment will need to be purchased. As construction of the project moves forward, the District will require additional facilities, staff and equipment.

g. References.

Lentz. C.R. 1974. Review of Yakima Project Water Rights and Related Data.

Yakima County Comprehensive Plan.

Yakima River Basin Water Enhancement Project.

Section 8. Relationships to other projects

The proposed project is consistent with the goals of the Yakima Basin Enhancement project and will help meet some of the instream fish and wildlife need of the Yakima

River Basin. By controlling excessive runoff flows, the water quality in the Yakima River will be improved at certain times of the year. Consistent flows in Ahtanum Creek will allow fish and wildlife to return to the stream.

Section 9. Key personnel

The project will be managed by the staff of AID with assistance from specialized consultants. The AID is currently soliciting statements of qualifications from interested Engineering firms for phase 1. After statements of qualifications have been reviewed and an Engineering Consultant hired. Resumes can be sent forth with.)

Section 10. Information/technology transfer

The Engineering process that is proposed for this design is an example of the steps that could be followed by proponents of other storage projects. The process could be applied in other parts of the basin. This is an example of a proponent motivated by a strong need for more water taking the initiative to move a project forward.